

HANDBOOK OF PHONOLOGICAL DATA
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

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380 Korean	380 Korean	380 Korean
380 01 p [b] ⁶⁰ [p-unreleased] ⁶¹	14 s-glottalized	54 e
380 02 p-aspirated	15 m ⁰² [b-prenasalized] ⁶⁵ (free)	55 e-long
380 03 p-glottalized	16 n ⁰² [d-prenasalized] ⁶⁶ (free)	56 o-trema ³⁶
380 04 t [d] ⁶⁰ [t-unreleased] ⁶¹	[n-unreleased] ⁶¹ [n-palatalized] ⁶⁷	57 ash [epsilon] (free)
380 05 t-aspirated	17 eng ⁰²	58 ash-long
380 06 t-glottalized	18 102 33 [r-flap] ⁶⁸ [l-palatalized] ⁶⁹	59 a
380 07 k [g] ⁶⁰ [k-unreleased] ⁶¹	19 h [c-fricative] ⁷⁰ [h-voice] ⁷¹ (free)	60 a-long
380 08 k-aspirated	20 glottal stop ³⁴ (transitional)	61 u ⁰³
380 09 k-glottalized		62 u-long
380 10 t/s-hacek ^{01 30} [t/s] ⁶² [d/z-hacek] ⁶⁰		63 i-trema ^{04 37} [i-trema-voiceless] ⁷²
380 11 t/s-hacek-aspirated ³¹		64 i-trema-long
380 12 t/s-hacek-glottalized ³¹	51 i	65 o ⁰³
380 13 s [s-hacek] ⁶³ [z] ^{60 64}	52 i-long	66 o-long
	53 u-trema ³⁵	67 e-trema ⁰⁴
		68 e-trema-long
		69 yod ⁰⁵
		70 w ⁰³

- 380 \$a Korean \$b Standard Seoul \$d Altaic \$e Korea \$f 34 million \$g Merritt Ruhlen \$g John Crothers (review)
- 380 \$a Cho, Seung-Bog \$b 1967 \$c A Phonological Study of Korean \$f Acta Universitatis Upsaliensis, Studia Uralica et Altaica Upsaliensia, No. 2 \$g Uppsala: Almqvist & Wiksells \$q author is native speaker \$s while an extensive investigation of Korean phonology (both synchronic and diachronic) this source is idiosyncratic in many respects, especially in the use of historical data in the synchronic analysis.
- 380 \$a Martin, Samuel E. \$b 1951 \$c "Korean Phonemics" \$d Language 27:4, 519-533 \$e Readings in Linguistics I, ed. by Martin Joos, pp. 364-371. \$g Chicago: University of Chicago Press \$q informants
- 380 \$a Martin, Samuel E. \$b 1954 \$c Korean Morphophonemics \$g Baltimore: Waverly Press
- 380 \$a Martin, Samuel E. and Young-Sook C. Lee \$b 1969 \$c Beginning Korean \$g New Haven: Yale University Press \$q author is native speaker
- 380 \$a Kim, Chin-Wu \$b 1968 \$c "The Vowel System of Korean" \$d Language 44:3, 516-527 \$q author is native speaker \$s While the article is, in my opinion, excessively abstract, it still contains much useful information. MR
- 380 \$a Kim, Chin-Wu \$b 1972 \$c "Two Phonological Notes: A-sharp and B-flat" \$e Contributions to Generative Phonology ed. by Michael K. Brame, 155-170. \$g Austin: University of Texas Press \$q author is a native speaker \$s only selected problems in Korean phonology are treated.
- 380 \$a CREAKY VOICE VOWELS (NON-DISTINCTIVE) \$A According to Martin (1951) and others quoted by him, the glottalization of consonants continues through the following vowel, accompanied by relatively higher pitch than is found in non-glottalized syllables. Since all vowels occur after glottalized consonants, this should mean a full set of creaky voice allophones. [JHC]

- 380 \$a **GLOTTALIZED OBSTRUENTS** \$A There is some question concerning the exact phonetic nature of the Korean "glottalized" obstruents, which are apparently distinct from the ordinary variety of voiceless ejectives. Martin 1951 (p.524) summarizes the controversy as follows: "The phonetic nature of [the glottalized obstruents] has been variously interpreted. Haguenauer calls them 'quasi-geminees' and Polivanov considers them 'long.' On the other hand, the Korean phonetician Jung calls the sounds 'implosives' and the late eminent Japanese Koreanist Ogura writes them pre-glottalized. All observers seem to agree on the tenseness of the articulation, but differ in their evaluation of its nature and significance. Ramstedt points out that the tenseness continues throughout the syllable, even raising the perceived pitch of the vowel. It is true that these sounds are of longer duration than a single consonant phoneme; so are /p-aspirated, t-aspirated, k-aspirated, t/s-hacek-aspirated/. Although the sounds are not so heavily glottalized as many American Indian consonants, I hear distinct glottal tension." (p.524)
- 380 \$a **INTONATION** \$A See Cho, p.127-135.
- 380 \$a **LABIALIZED CONSONANTS (NON-DISTINCTIVE)** \$A Martin 1951 (RIL p.366) finds that the lip rounding of /u, o, w/ "begins simultaneously with a preceding consonant." All consonants occur before at least two of the rounded phonemes. (p.367) Cho, on the other hand, finds that labial consonants do not occur before /w/. No labialized allophones are included in the Archive inventory of segments.
- 380 \$a **LONG VOWELS** \$A "Long vowels occur in contrast with short vowels, and are treated as dyads of like vowels, by analogy with dyads of unlike vowels, which occur freely." (Martin 1951, p.522) "For some speakers there are few contrasts of long and short vowels; for others there are many.... Variable vowel length usually occurs only within the boundaries of a morph; vowels which are long for all speakers usually include a morph boundary." (Martin 1951, p.522) "Most dictionaries do not record vowel length.... Lexicographers frequently record vowel length according to their personal (idiolectic) impressions. As a matter of fact, very few dictionaries of recent origin show vowel length. One and the same vowel is often recorded differently by different lexicographers, and even by the same lexicographer in different papers or works." (Cho, p.65)
- 380 \$a **MORPHEME STRUCTURE** \$A (C)(G)V(C))C(G)V(C)(C) \$A "Most Korean morphs have the neat shape of one syllable or two syllables." (Martin 1954, p.19) Morphemes may end in consonant clusters; these never occur syllable internally; in general the second consonant of such groups occurs only in syllables with a following vowel in an inflectional ending or particle. Otherwise the cluster is reduced.
- 380 \$a **MORPHOLOGICAL STRUCTURE OF WORDS** \$A Compound stems may exhibit assimilation or reduction of consonants at the morpheme boundary. Martin considers nouns to be uninflected words, but they do occur before particles and the copula, and this may affect the shape of the stem. Verbs take a number of inflectional suffixes, which Martin divides into the general categories of "status, tense, aspect, style, and mood." A number of consonantal and vocalic modifications occur at the boundaries between stem and affix or between affixes. See Martin 1954, p.13ff, 27ff, 35ff.
- 380 \$a **PALATALIZED CONSONANTS (NON-DISTINCTIVE)** \$A Martin 1951 says that "the front position for the phoneme /yod/ is frequently assumed simultaneously with a preceding consonant. (RIL p.366) Cho notes this palatalization explicitly only for /n/.
- 380 \$a **STRESS** \$A According to Martin "stress is not phonemic in Korean; if there is, contrary to my view, a phoneme of stress, it belongs with the pitch components to the intonation system." (p.525) Cho, on the other hand, finds that there is a word accent system. (p.121ff) According to him accent is manifested chiefly by raised pitch on the accented syllable. There is one accent per word. Cho gives examples of accent on almost any syllable of polysyllabic words. It appears from the examples however, that there are two fundamental patterns, accent on the first syllable, and accent on the second. All examples of polysyllables with final stress involve sound symbolism, reduplication, or some kind of expressive effect. There are also examples of non-final accent on neither the first nor the second syllable; these appear to be compound forms, with the main accent falling on the second element. Given the limited number of examples, these generalizations have to be regarded as conjectural. [JHC]
- 380 \$a **SYLLABLE** \$A (C)(G)V(:)(C)
- 380 \$a **TONE** \$A Some dialects of Korean have distinctive tone, with two or three contrastive tone levels. There is a partial correlation with vowel length in standard Korean. See Martin 1954, p.9.
- 380 \$a **VOWEL HARMONY** \$A "'Vowel harmony' is the non-contiguous assimilation of vowels which occur in the perfect-aspect stem-formation of the verb or adjective. The verbal or adjectival stem ends either in /a/ or /e-trema/..., depending upon the vowel of the preceding root.... Low vowels in the root (i.e. /a, o/) are followed by the low vowel /a/, while high vowels (i.e. /i, i-trema, u, u-trema, e-trema, e, o-trema, ash/) are followed by /e-trema/.... The limited occurrence of vowel harmony in Korean is mainly due to the change of the Middle Korean vowel system which took place through the loss of the phonemic distinction of the vowel /alpha-unrounded/. (Cho 1967, p.185)

- 380 01 \$A "For many speakers, the phoneme /t/s-hacek/ is prepalatal when not followed by a back unrounded vowel /i-trema, e-trema, a/; for some speakers, this phoneme is prepalatal in all environments, for a few it is usually alveolar." (Martin 1951, p.525)
- 380 02 \$A "/m, n, eng, l/ are tenser than most other consonants...." (Martin 1951, p.524)
- 380 03 \$A "The phonemes /u, o, w/ are characterized by considerable lip protrusion and rounding, which begins simultaneously with a preceding consonant." (Martin 1951, p.523-4)
- 380 04 \$A /i-trema, e-trema/ are "slightly centralized." (Martin 1951, p.525)
- 380 05 \$A "The front position for the phoneme /yod/ is frequently assumed simultaneously with a preceding consonant." (Martin 1951, p.524)
- 380 30 \$A Cho does not mention the phone [t/s-hacek] at all. He finds [t/s], while Martin has both phones.
- 380 31 \$A The phonetic interpretation of /t/s-hacek-aspirated/ and /t/s-hacek-glottalized/ is based on Martin (p.367 in RIL). Cho says they are alveolar, i.e. [t/s-aspirated] and [t/s-glottalized].
- 380 33 \$A /l/ occurs syllable finally and before consonants. (Martin 1951, p.367)
- 380 34 \$A Cho sets up a phoneme /glottal stop/, but it appears from his examples that it occurs automatically between vowels. (p.62) Martin does not mention this phone, but does say that "there is a clear cut syllable onset." (p.367 in RIL) Cho also uses /glottal stop/ to indicate a morphophoneme which causes glottalization of an immediately following consonant in compound words. See p.283ff.
- 380 35 \$A "For most speakers the sequence /w.i/ occurs everywhere in free variation with /u-trema/." (Martin 1951, p.521) Cho does not mention free variation of /u-trema/. He finds that it occurs (1) as a variant of /u/ before /i/, and (2) as an independent vowel phoneme in some stems. (See p.75.)
- 380 36 \$A "For many speakers, the phoneme /o-trema/ does not exist, corresponding to some (in fact most) of the occurrences of the sequence /w.e/. For most of these speakers, the sequence /w.e/ is everywhere in free variation with /o-trema/." (Martin 1951, p.521) According to Cho this phoneme derives from two sources in Middle Korean, */w.e/ and */o-trema/. (p.76-77) He finds that the two have merged completely in Modern Korean, and exist as two variants of a single phoneme.
- 380 37 \$A [i-trema] is the "neutral" vowel in Korean which is used to break up impermissible consonant clusters.
- 380 60 \$A Unaspirated stops and affricates are voiced (1) intervocalically and (2) following a nasal or liquid. (p.48, 51, 52, 59) Martin (1951, p.366 in RIL) suggests a degree of optionality in the voicing.
- 380 61 \$A "Syllable-final consonants are typically unreleased." (Martin 1951, p.525)
- 380 62 \$A /t/s-hacek/ is realized as [t/s] when followed by /i-trema, e-trema, a/. (Martin 1951, p.522)
- 380 63 \$A "The phoneme /s/ is palatalized by many speakers, especially before a front vowel." (Martin 1951, p.525)
- 380 64 \$A "The phonemes /p, t, k, t/s-hacek, s/ are typically voiceless, and lax.... Between typically voiced phonemes, these consonants are sometimes voiced in rapid speech, but in somewhat slower speech the voicing is absent or very weak." (Martin 1951, p.524-5) However, Cho (1967, p.144) claims "it is one of the characteristic features of the Korean consonantism that the fricative /s/ is not voiced under the same phonetic condition as that under which the four voiceless consonants /p, t, k, t/s-hacek/ are voiced."
- 380 65 \$A "When [m] occurs before a pause or before the voiceless plosives, affricate and fricative, it tends to be changed to a naso-oral voiced plosive [b-prenasalized]." (Cho 1967, p.49) "[b-prenasalized] and [m] are free variants of /m/ before /w, u, o/." (Martin 1951, p.523)
- 380 66 \$A "The phoneme /n/ is occasionally [d-prenasalized] before a front vowel." (Martin 1951, p.523)
- 380 67 \$A /n/ is palatalized before [yod.V] and some [i]'s. (Cho 1967, p.53)
- 380 68 \$A /l/ is realized as [r-flap] intervocalically. (Martin 1951, p.367) Also found word initially in recent loans. (Cho, p.55; Martin 1954, p.25)
- 380 69 \$A /l/ is palatalized before [yod.V] and some [i]'s in intervocalic position. (Cho 1967, p.57) Martin & Lee claim this phone occurs before consonants.
- 380 70 \$A /h/ is realized as [c-fricative] before [yod.V] and optionally before /i/. (Cho, p.62)

- 380 71 \$A "Between typically voiced phonemes, the phoneme /h/ is frequently voiced." (Martin 1951, p.525)
- 380 72 \$A /i-trema/ is voiceless after the fricative, affricates and aspirated consonants in the medial position. (Cho, p.78)